

Overhang Falsework Design Example Using The Standard Overhang Falsework Sheets

Known Data for the Bridge, Overhang Brackets, Hangers, Screed, and Timber Joists.

Type IV prestressed concrete girder	8 wheel screed machine
2' - 9" slab overhang (Measured from the edge of the top flange to the edge of superstructure.)	W = 950 lbs. maximum wheel load
11.75" average overhang slab thickness	D1 = 2' - 0" (See Table 2)
Bracket "K" dimension of approximately 44"	D2 = 3' - 6" (See Table 2)
Bracket diagonal safe working load = 3600 lbs.	R : the screed load factor (See Table 2)
Hanger safe working load = 6000 lbs.	Screed load per bracket = R*W
	Max. joist spacing = 12" (See Table 3)
	Joist size = 2" X 4" (See Table 3)

1. Make an initial guess for the Screed Load Factor, $R = 1.5$.
Estimate the maximum screed load per bracket - $SLPB = R \times W = 950 \times 1.5 = 1425$ lbs.
Round this value up to 1500 lbs. for use in the bracket spacing table.
2. Enter [Table 1-3](#) with a 12" avg. slab thickness, a bracket K dimension of 40", and a screed load per bracket of 1500 lbs. Use this data in the table to establish $S = 3' - 11"$ for the overhang bracket spacing for a hanger with a 6000 lbs. safe working load.
3. Compute $S/D1 = 3.917 / 2 = 1.96$. Round this value up to 2.0 for use in the screed load factor table.
Compute $S/D2 = 3.917 / 3.5 = 1.12$. Round this value up to 1.2 for use in the screed load factor table.
Enter [Table 2](#) with a "S/D1" of 2.0 and a "S/D2" of 1.2 to establish the Screed Load Factor $R = 1.67$.
4. Re-enter [Table 1-3](#) with an updated Screed Load Per Bracket = $R \times W = 1.67 \times 950 = 1587$ lbs.
Round this up to 1750 lbs. and repeat Step 2. This results in the bracket spacing $S = 3' - 6"$.
5. Update $S/D1 = 3.5 / 2 = 1.75$. Round this value up to 1.8 for use in Table 2.
Update $S/D2 = 3.5 / 3.5 = 1.0$.
Re-enter [Table 2](#) with $S/D1 = 1.8$ and $S/D2 = 1.0$ to establish a Screed Load Factor $R = 1.44$.
Update the Screed Load Per Bracket = $R \times W = 1.44 \times 950 = 1368$ lbs.
Comparing $SLPB = 1368$ lbs. with the estimated $SLPB = 1750$ lbs. shows that a bracket spacing $S = 3' - 6"$ is sufficient.
6. For a 12" avg. slab depth, [Table 3](#) shows that the longest allowable span for a 2" X 4" joist is 4' - 3" with a 12" joist spacing. Comparing the 3' - 6" bracket spacing with the allowable 4' - 3" joist span length 4' - 3" shows that the bracket spacing governs design.

Therefore, the maximum bracket spacing 3' - 6".